

Biomek Set-up

Genewriter - Oligonucleotide Pooling Plan

F-A1	F-A2			F-A3				F-A4			F-A		
	R-A1			R-A2		R-A3			R-A4		F		-A5
	1	2	3	4	5	6	7	8	9	10	11	12	
А	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
В	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
C		\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
E	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				\bigcirc			
F	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	
G	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	O	\bigcirc	
Н	\bigcirc	\bigcirc	\bigcirc	$\frac{\circ}{}$	$\frac{O}{C}$	\bigcirc	$\frac{O}{C}$	$\frac{\circ}{}$	\bigcirc	\bigcirc	$\overline{\bigcirc}$	0]
	1	2	3	4	5	6	7	8	9	10	11	12	
A		$\overline{\bigcirc}$	\bigcirc	$\overline{\bigcirc}$	$\overline{\bigcirc}$	\bigcirc	$\overline{\bigcirc}$	\bigcirc	$\overline{\bigcirc}$	\bigcirc	$\overline{\bigcirc}$	\bigcirc	
В	Ō	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	Ŏ	
С	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
D E	$ \mathcal{S} $									\bigcirc	\bigcirc		
F	$ 0\rangle$	\widetilde{O}	\mathcal{O}	\bigcirc	\bigcirc	\mathcal{O}		\bigcirc	\bigcirc	\bigcirc	\bigcirc	$\bigcup_{i=1}^{n}$	
G	Ŏ	_	_			_	_	Ŏ		_	_	_	
Н	0	\bigcirc	0	0	0	0	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	

Figure 2

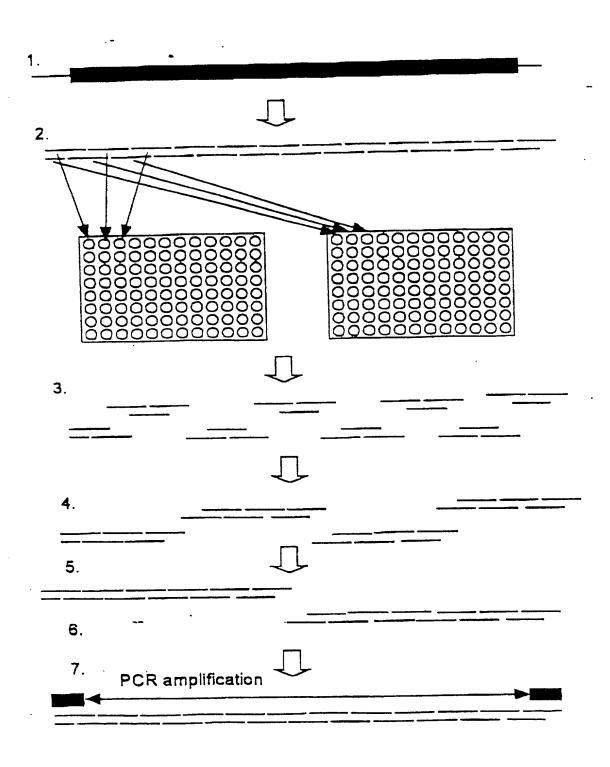


Figure 3

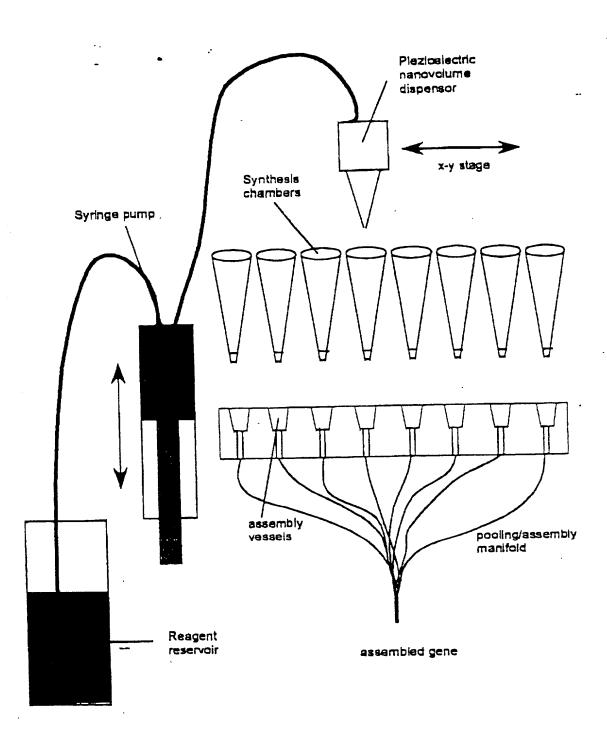


Figure 4

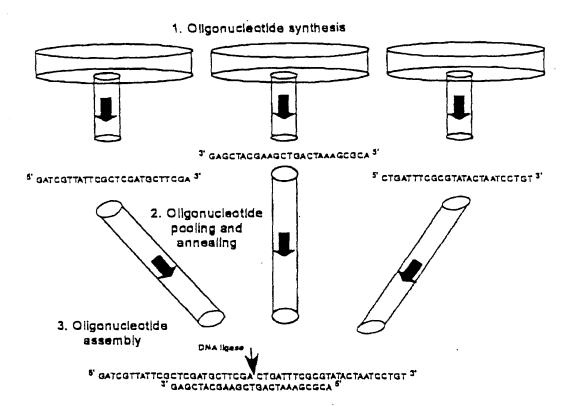
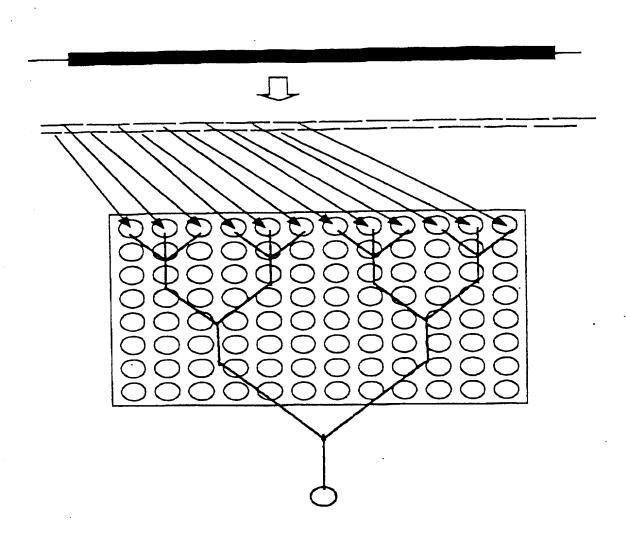


Figure 5



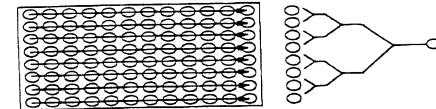


Figure 7

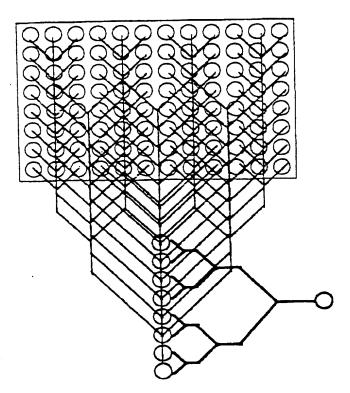


Figure 8

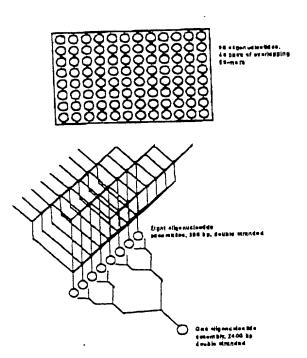


Figure 9

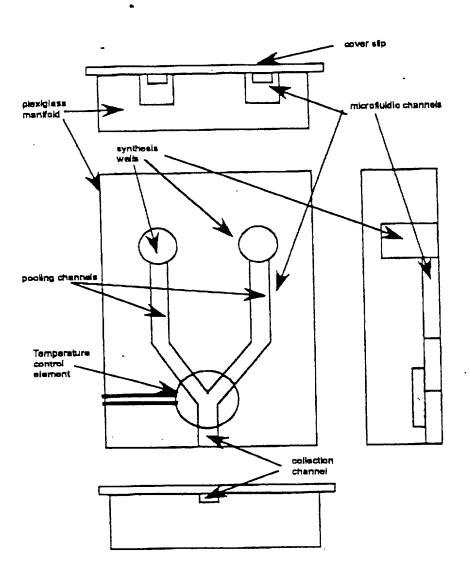


Figure 10

Genewriter Platform Design 8 x 96 well plates addressed with 16 piezioslectno nanovolume dispense heads; One wash/dry station and one additional plate station. 5 plate evacuated by a single vacuum station.

Capacity of 8 x 95 = 768 oligos/run

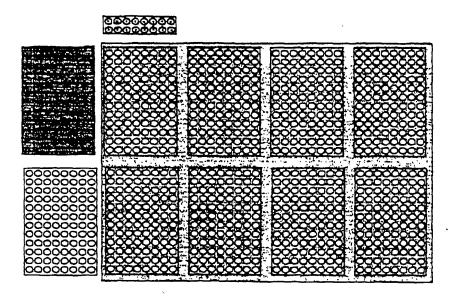


Figure 11

Genewiter Piatform Design - High Capacity Mode 8 x 1536 well microssesy plates addressed with 16 plezioelectric nanovolume dispense heads; One wash/dry station and one additional plate station. 18 plates evacuated by a single vacuum station.

Capacity of 5 x 1636 = 12,266 oligos/run

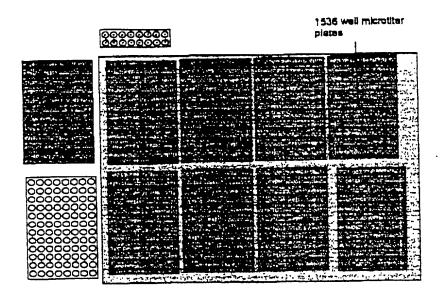
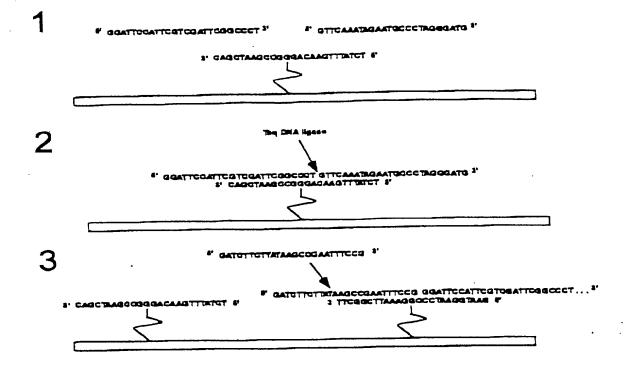


Figure 12



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Figure 13

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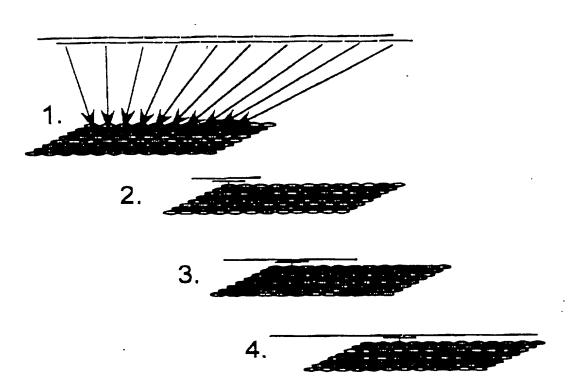
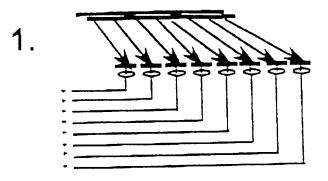
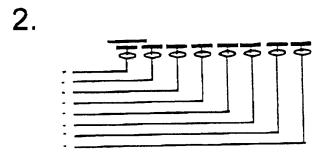


Figure 14





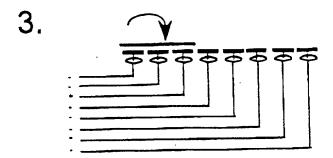


Figure 15

Bidirectional primer extension strategy for gene assembly

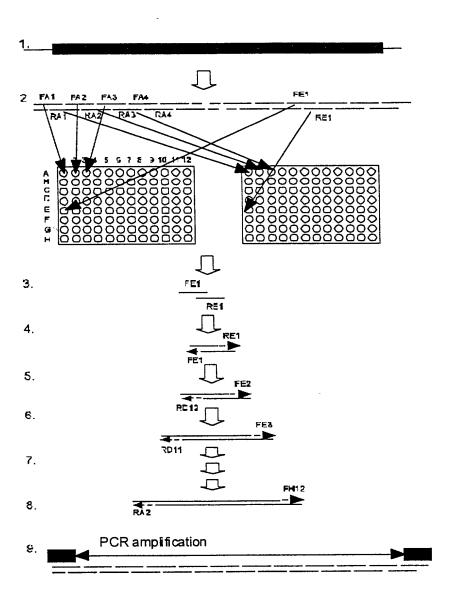


Figure 16

System Diagram for Genewriter

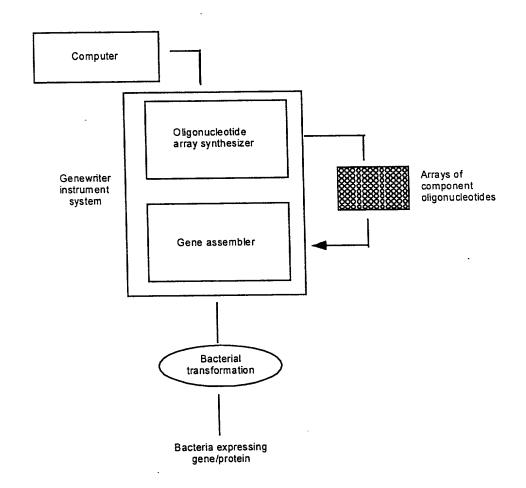


Figure 17

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Perspective view of Genewriter Instrument

Genewriter diagram

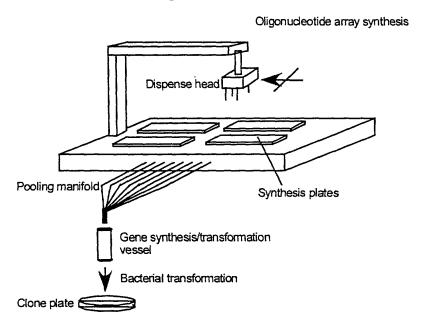


Figure 18